

Pneumococcal Disease and Immunization in the Elderly

Streptococcal pneumoniae is a **gram-positive bacteria** that has the ability to invade various organs, including the middle ear (otitis media), lungs (pneumonia), central nervous system (meningitis), heart valves (endocarditis) and blood stream (septicemia). Also called **pneumococcus**, it results in **40,000 deaths a year** in the United States, more than all other vaccine-preventable diseases combined, with some strains resistant to antibiotics. The elderly account for 90% of these deaths, yet pneumococcal vaccination is 60-70% effective in preventing the infection. This bacteria presents a significant danger for elderly persons within our communities. The incidence of invasive pneumococcal disease is 54 per 100,000 adults over the age of 74.

Pneumococcal pneumonia accounts for 25-35% of all pneumonias requiring hospitalization and is the **most common cause of nursing facility-acquired pneumonia**. Symptoms can include fever, chills, cough, mucus production, chest pain that increases with breathing, confusion, and changes in level of consciousness.

The available vaccine is effective against 23 types of pneumococcus (85-90% of the types that cause invasive pneumococcal infections). Most healthy adults will develop protection to most or all types within 2-3 weeks of administration. The immune systems of the aged or chronically ill may not respond as efficiently.

It is recommended by the Advisory Committee on Immunization Practices (ACIP) of the Centers for Disease Control and Prevention that the **pneumococcal vaccine be given to all people aged 65 or older, and those with increased health risks** (such as long term heart, lung, kidney, or liver disease, diabetes, and weakened immune systems). The QINC program would add to this subset: **all residents and staff of long term care facilities**. The 23-valent vaccine is given as a 0.5cc dose intramuscularly. It may be administered at the same time as the influenza vaccine, but in separate arms. The vaccine is effective in preventing 57-75% of invasive disease. One dose is recommended for most persons; however, a single revaccination dose is recommended for those who meet the specific criteria listed below. Routine revaccination of previously vaccinated immunocompetent persons is not recommended.

About half of those immunized with the 23-valent vaccine will experience no untoward effects. The remainder may experience soreness and inflammation at the site. Less than 1% report fever, chills and malaise for 1-2 days. Fewer than 1 out of 10,000 may experience more serious allergic reactions (hives, difficulty in breathing, shock). Any serious reaction to a prior dose of 23-valent vaccine or moderate to severe acute illness is a contraindication to vaccination.

Pneumococcal revaccination varies depending on age and other factors. Those vaccinated prior to age 65, with chronic medical conditions (cardiovascular disease, pulmonary disease, chronic liver disease, cerebrospinal fluid leaks, sickle cell, asplenic, immunocompromised), should be revaccinated at age 65, if >5 years have elapsed since the previous dose.

The **Pneumococcal Immunization Informed Consent may be viewed or downloaded**. QINC appreciates your efforts to keep informed and proactive!